



SAFETY DATA SHEET

Permabond TA440B

1. Identification

Product identifier

Product name Permabond TA440B

Recommended use of the chemical and restrictions on use

Application Adhesive.

Details of the supplier of the safety data sheet

Supplier Permabond LLC
14 Robinson Street
Pottstown, PA 19464
USA
Telephone: 732-868-1372 or 800-640-7599
Website: www.permabond.com

Emergency telephone number

Emergency telephone Medical: Poison Control Center 866-827-6282 (toll free) or 303-389-1109 Transport: CHEMTREC 800-424-9300

2. Hazard(s) identification

Classification of the substance or mixture

OSHA Regulatory Status Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Repr. 1B - H360Df

Label elements

Pictogram



Signal word

Danger

Hazard statements

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H360Df May damage the unborn child. Suspected of damaging fertility.

Permabond TA440B

Precautionary statements

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P261 Avoid breathing vapor/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P302+P352 If on skin: Wash with plenty of water.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P313 If exposed or concerned: Get medical advice/ attention.
 P310 Immediately call a poison center/ doctor.
 P332+P313 If skin irritation occurs: Get medical advice/ attention.
 P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P405 Store locked up.
 Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Contains

TETRAHYDROFURFURYL METHACRYLATE, METHACRYLIC ACID, 2-HYDROXYETHYL METHACRYLATE

3. Composition/information on ingredients

Mixtures

2-PHENOXYETHYL METHACRYLATE CAS number: 10595-06-9	10-30%
Classification Skin Irrit. 2 - H315 Eye Irrit. 2A - H319	
TETRAHYDROFURFURYL METHACRYLATE CAS number: 2455-24-5	5-10%
Classification Repr. 1B - H360Df	
METHACRYLIC ACID CAS number: 79-41-4	1-5%
Classification Acute Tox. 4 - H302 Acute Tox. 3 - H311 Acute Tox. 4 - H332 Skin Corr. 1A - H314 Eye Dam. 1 - H318 STOT SE 3 - H335	

PermaBond TA440B

2-HYDROXYETHYL METHACRYLATE	1-5%
CAS number: 868-77-9	
Classification Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Skin Sens. 1 - H317	
COPPER NAPHTHENATE	<1%
CAS number: 1338-02-9	
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H302 Not relevant.	
2-ETHYLHEXANOIC ACID, COPPER SALT	<1%
CAS number: 22221-10-9	
Classification Acute Tox. 4 - H302 Not relevant.	
2-ETHYLHEXANOIC ACID	<1%
CAS number: 149-57-5	
Classification Repr. 2 - H361d	

The full text for all hazard statements is displayed in Section 16.

Composition comments Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. First-aid measures

Description of first aid measures

Inhalation	Move the exposed person to fresh air. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention if any discomfort continues.
Skin Contact	Remove contaminated clothing. Wash skin thoroughly with soap and water. If symptoms develop, obtain medical attention
Eye contact	Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Remove any contact lenses and open eyelids wide apart. Get medical attention immediately.

Most important symptoms and effects, both acute and delayed

Inhalation	May cause respiratory system irritation.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.

PermaBond TA440B

Indication of immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations. Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Hazardous combustion products Burning produces irritating, toxic and obnoxious fumes. Carbon monoxide, carbon dioxide, and unknown hydrocarbons.

Advice for firefighters

Protective actions during firefighting Use water to keep fire exposed containers cool and disperse vapors.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses.

Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with sand or other inert absorbent. Transfer to suitable, labelled containers for disposal.

Reference to other sections For personal protection, see Section 8. For waste disposal, see section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Avoid contact with skin, eyes and clothing. Do not breathe vapour/spray. Wash hands thoroughly after handling. Keep container tightly sealed when not in use.

Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Specific end uses(s)

Specific end use(s) Adhesive.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

METHACRYLIC ACID

Long-term exposure limit (8-hour TWA): ACGIH 20 ppm 70 mg/m³

2-ETHYLHEXANOIC ACID

Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³ inhalable fraction and vapor

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ACGIH = American Conference of Governmental Industrial Hygienists.

Ingredient comments WEL = Workplace Exposure Limits

Exposure controls

Appropriate engineering controls Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for slashing or spraying exists.

Hand protection Nitrile rubber or Viton™ gloves are recommended. Cotton or other absorbent gloves should not be worn.

Other skin and body protection Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance.

Hygiene measures Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated.

Respiratory protection Respiratory protection may be required if excessive airborne contamination occurs. Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Green.
Odor	Characteristic.
Odor threshold	No information available.
pH	Not relevant.
Melting point	Not available.
Initial boiling point and range	Not relevant.
Flash point	>100°C
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.1
Solubility(ies)	Insoluble in water. Soluble in the following materials: Organic solvents.
Partition coefficient	Not available.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not available.
Viscosity	≈8500 mPa s @ 23°C
Explosive properties	Not relevant.

PermaBond TA440B

Oxidizing properties	Not applicable.
Other information	Not relevant.
Volatile organic compound	<2 %, 20 grams/liter (Estimated)

10. Stability and reactivity

Reactivity	The following materials may react with the product: Strong oxidizing agents. Acids.
Stability	Stable at normal ambient temperatures. Polymerizes when heated.
Possibility of hazardous reactions	Reactions with the following materials may generate heat: Amines.
Conditions to avoid	Do not store near heat sources or expose to high temperatures.
Materials to avoid	Amines. Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition could produce carbon monoxide, carbon dioxide, and unidentified organic compounds.

11. Toxicological information

Information on toxicological effects

Toxicological effects	The toxicological properties of this product have not been fully evaluated. Use of good industrial hygiene practices is required. Avoid direct contact with skin or eyes. Do not ingest or inhale.
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Skin corrosion/irritation

Skin corrosion/irritation	Irritating to skin.
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Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye damage.
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Respiratory sensitization

Respiratory sensitization	Based on available data the classification criteria are not met.
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Skin sensitization

Skin sensitization	May cause sensitisation by skin contact.
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Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.
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Genotoxicity - in vivo	Based on available data the classification criteria are not met.
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Carcinogenicity

Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a known carcinogen.
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Reproductive toxicity

Reproductive toxicity - fertility	Contains a substance/a group of substances which may damage fertility. Contains a substance/a group of substances which may damage the unborn child.
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Specific target organ toxicity - single exposure

STOT - single exposure	Based on available data the classification criteria are not met.
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Specific target organ toxicity - repeated exposure

PermaBond TA440B

STOT - repeated exposure STOT RE 2 - H373

Inhalation	May cause respiratory system irritation.
Ingestion	No harmful effects expected from quantities likely to be ingested by accident.
Skin Contact	Irritating to skin.
Eye contact	Causes serious eye damage.
Acute and chronic health hazards	Irritating to skin. Irritating to eyes. May cause sensitisation by skin contact.
Route of exposure	Skin and/or eye contact Inhalation
Target Organs	Eyes Skin Respiratory tract

Toxicological information on ingredients.

TETRAHYDROFURFURYL METHACRYLATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,000.0

Species Rat

ATE oral (mg/kg) 4,000.0

Reproductive toxicity

Reproductive toxicity - fertility Suspected of damaging fertility.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 300 mg/kg, Oral, Rat

METHACRYLIC ACID

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 1,320.0

Species Rat

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 1,000.0

Species Rabbit

ATE dermal (mg/kg) 1,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 7.1

Species Rat

PermaBond TA440B

ATE inhalation (vapours
mg/l) 11.0

Skin corrosion/irritation

Animal data Dose: Method: OECD 404, 3 minutes, Rabbit Corrosive.

Serious eye damage/irritation

Serious eye
damage/irritation Method: OECD 405, Rabbit Corrosive.

Respiratory sensitization

Respiratory sensitization Guinea pig: Not sensitizing. Method: various test systems

Skin sensitization

Skin sensitization Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity CMR: no

Reproductive toxicity

Reproductive toxicity -
fertility No evidence of reproductive toxicity in animal studies.

Reproductive toxicity -
development Non-teratogenic, not embryotoxic

Specific target organ toxicity - single exposure

Target organs Respiratory tract Irritating.

Specific target organ toxicity - repeated exposure

Target organs No specific target organs known.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

2-HYDROXYETHYL METHACRYLATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀
mg/kg) 5,000.0

Species Rat

ATE oral (mg/kg) 5,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀
mg/kg) 5,000.0

Species Rabbit

ATE dermal (mg/kg) 5,000.0

Acute toxicity - inhalation

PermaBond TA440B

Notes (inhalation LC₅₀)	No information available.
<u>Skin corrosion/irritation</u>	
Animal data	Erythema/eschar score: Very slight erythema - barely perceptible (1). Not irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Moderately irritating.
<u>Respiratory sensitization</u>	
Respiratory sensitization	No information available.
<u>Skin sensitization</u>	
Skin sensitization	Guinea pig maximization test (GPMT) - Guinea pig: Sensitizing.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Conclusive data but not sufficient for classification.
Genotoxicity - in vivo	Chromosome aberration: Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	No specific test data are available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Screening - NOAEL \geq 1000 mg/kg/day, Oral, Rat F1
Reproductive toxicity - development	Developmental toxicity: - NOAEL: \geq 1000 mg/kg/day, Oral, Rat
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	No specific test data are available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	No specific test data are available.
<u>Aspiration hazard</u>	
Aspiration hazard	Not applicable.

12. Ecological Information

Ecotoxicity	There are no data on the ecotoxicity of this product.
<u>Bioaccumulative potential</u>	
Partition coefficient	Not available.
<u>Other adverse effects</u>	
Other adverse effects	None known.

13. Disposal considerations

<u>Waste treatment methods</u>	
General information	Empty containers may contain product residue; follow SDS and label warnings even after they have been emptied.
Disposal methods	Dispose of according to Federal, State and local governmental regulations.

PermaBond TA440B

14. Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number

Not applicable.

UN No. (DOT) Not applicable.

UN proper shipping name

Not applicable.

Proper shipping name (DOT) Not applicable.

Transport hazard class(es)

No transport warning sign required.

DOT transport labels

No transport warning sign required.

Packing group

Not applicable.

DOT packing group Not applicable.

Environmental hazards

Environmentally Hazardous Substance

No.

Special precautions for user

Not applicable.

DOT TIH Zone Not applicable.

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None above reporting levels

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None above reporting limits

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None above reporting limits

SARA 313 Emission Reporting

None above reporting limits

SARA (311/312) Hazard Categories

Acute
Chronic

PermaBond TA440B

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm

Inventories

Canada - DSL/NDSL

All the ingredients are listed or exempt.

US - TSCA

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

None above reporting limits

16. Other information

Revision date 1/31/2018

Revision 2

Supersedes date 5/5/2015

Hazard statements in full

- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H360Df May damage the unborn child. Suspected of damaging fertility.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.